in parts of Hassan, Chikmagalur, Bidar and Gulbarga districts, there was no rainfall during the month of February 1957. Planting of sugarcane and harvesting of rabi, jowar, wheat and gram were nearing completion, while cotton picking and ploughing and harrowing of lands were in progress by the end of March 1957. Rabi crops in parts of Raichur District were reported not satisfactory.

(ii) Agriculture.

721. Within the resources available at its disposal, the Department of Agriculture was steadily pursuing its policy of amelioration of the conditions of the ryot class, with a view both to enrich the cultivator and to help the country in wading through its difficult and onerous responsibility of finding food to the people, by producing more and more of food.

722. The average rainfall received in the Bangalore Division was 31·95 inches during the year. For the preparatory cultivation, the rains received were generally insufficient followed by the excessive rainfall in the succeeding north-east monsoon. The excessive rainfall received in September and October 1956 in the district of Tumkur caused the break of major tank in Kunigal Taluk. Rainfall and Agricultural Seasons.

723. The rainfall received in the Mysore Division was 85·61 inches. Failure of rains gave rise to distress conditions in the Mysore District. Monsoon rains were scanty followed by heavy downpour of north-west monsoon rains during October 1965.

724. The rainfall received during the year in the Dharwar Division was 63·75 inches. Rains received in May 1956 were helpful for preparatory cultivation. The heavy rains that followed in June and onwards, necessitated the postponement of sowing of kharif crops.

725. The total rainfall received in the Raichur Division was 38·66 inches during the year. Premonsoonic showers received helped the tillage operations to the kharif lands. The heavy late rains received during the flowering and maturity periods of kharif crops had an adverse effect on them. Cotton crop suffered in Bellary and Raichur districts. The abnormal showers received in the Division not only deteriorated the quality of the various crops but also reduced the per acre production of crops considerably.

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Improved varieties of crops.

726. As a result of continued research by departmental scientific sections and experimentation in the Governmental farms, the several improved varieties of crops were introduced under the prinicipal crops, both food and commercial, for bulk cultivation.

727. In the erstwhile Mysore State, under paddy, strains like Ratnachoody (S. 749 and S. 718), Coimbatore Sanna (S. 661 and S. 699), Alur Sanna (S. 199 and S. 701) cover the bulk area under improved varieties. Bangarakovi (S. 1092) was gaining good popularity. Short duration varieties like S. 317, S.705 and China 45, 2 and China 10 and Baroda varieties were introduced and these were widely cultivated. The demand for Baroda variety was great owing to its being a dry crop and of short duration.

728. Under ragi, varieties like H. 22, Co2 and Ro. varieties were introduced and they cover wide areas, replacing the local ragi varieties. For cultivation in summer, E. S. 11 and K.I. were very well suited and were widely popular. The recently introduced variety "Aruna" was also very popular.

729. Under Sugarcane, the varieties popularly grown were, H.M. 320 and Co. 419. The area under Co. 419 was very extensive.

730. Under cotton, the varieties grown were M. A. 5, Laxmi, Jayadhar and Selection 69.

731. In Dharwar Division, M. 81 and M. 24 and A-90 were popular.

732. In Raichur Division, under paddy varieties, H.R. 35 was a later maturing variety mainly sown in Rabi season. It is fine in character and takes excellent polish.

733. The area under improved varieties was steadily increasing and there were attempts to bring more and more forest lands under cultivation.

Improvement in Agriculture.

734. Some of the important activities of the Department that were undertaken with a view to improving the conditions of the agricultural class and step up food production were :—

(1) Japanese Method of Paddy Cultivation—This system of cultivation not only minimises the sowing seed but also increases yields. As an adjunct to this, silt water selection of seed and raising nursery raised seed bed were extensively adopted. The average yield per acre by means of Japanese method of paddy cultivation on the local

method was 4,310 lbs. per acre. Japanese method of nursery and line planting has given the highest yield. During the year, an area of 1,75,326 acres was brought under this method of cultivation.

(2) Application of compost to crops.—The application of compost was increasingly becoming popular and compost was in great demand. The subsidy offered in the way of transport charges etc., was a filip for its use.

(3) Improved seeds,, implements and chemical fertilisers were procured by the Department through subsidised growers and experimental farms for distribution to ryots.

(4) Treatment of seeds before sowing against seed borne diseases.—This acts as a prophylactic measure against the attack of crops by diseases.

(5) Introduction of vegetative green manurial crops.

(6) Contour bunding to stop soil erosion and to conserve soil moisture.

As a result of these steps, the percentage of area under improved strains of crops has been increasing year by year.

(7) Tractor ploughing of land by tractors was found to be more effective and economical. There was a growing demand for the tractor service. During the year, an area of 11,272 acres was ploughed by tractors.

(8) Opening of demonstration plots under various crops, *viz.*, manurial, cultural and varietal in the fields of ryots.

(9) Reclamation of lands by bulldozing.—The demand for bulldozer services was also on the increase. During the year, the bulldozer services were given for 16,121 hours. In addition, 1,065 acres were levelled.

(10) Testing of soils for their contents and advising improvements by way of supplementing soil deficiencies.

(11) Treating of crops against the attack of pests and diseases.—The treating of crops against pests and diseases, unknown a few years ago, has now become very popular. To combat against the pests and diseases that attack the crops, latest appliances and fungicides and insecticides were employed.

735. Besides the above, the departmental staff advised the ryots in the proper and scientific cultivation of lands, by the application of improved seeds and artificials, and also

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participated in the Vanamahotsava and advised ryots in the matter of planting trees.

Acreage and Production.

736. The acreage and production of the principal crops of Mysore were:—

No.	.....	1956-57		1955-56	
		Area in acres	Production in tons	Area in acres	Production in tons
1	Paddy (Rice)	19,60,938	10,25,285	22,98,000	10,83,000
2	Ragi	19,14,676	7,43,423	19,76,000	7,44,000
3	Jower	65,57,922	8,93,861	65,61,000	12,06,000
4	Bajra	12,73,940	1,42,342	13,15,000	1,56,000
5	Cotton	24,02,758	3,58,434 (Bales)	27,93,000	4,11,000 (Bales)
6	Potato	...	Not available		
7	Tobacco	do	do	1,03,000	18,000
8	Sugarcane	1,22,867	80,93,962	1,15,000	28,60,000
9	Groundnut	20,70,080	5,57,312	20,50,000	4,97,000
10	Castor	1,12,614	7,870	1,14,000	9,000
11	Pepper	21,820	1,940	19,000	2,000
12	Wheat	7,27,009	62,623	8,70,000	81,000
13	Bengalgram	4,17,186	52,583	3,85,000	49,000
14	Cashew nut ...	Not available			
15	Cardamum ...				

Agricultural Chemistry.

737. Agricultural Chemistry section continued to be engaged in analysis of samples of soils, manures, fertilisers and plant material received from the cultivators for advice and also samples arising on the fields in the various experimental farms.

738. It was observed from the experiments on paddy and ragi that the responses to phosphates were better when the same was applied intimately mixed with farm manure and it was particularly mixed when the two were allowed to ferment for some time.

Yield of grain and straw in lbs. per acre.

	Paddy		*Ragi*	
	Grain	*Straw*	*Grain*	*Straw*
Farm Manure alone ...	2,747	4,960	1,010	1,630
Farm Manure and superfermented for one month ...	3,187	4,827	1,250	1,920

Compost Scheme.

739. Compost is prepared from town refuse collected by the sanitary staff of the town. The Budget provision of the scheme during the year was Rs. 1,20,250. In addition, a loan of Rs. 1,30,000 under the scheme was provided by the Government of India for the intensification of the compost production. The total production of urban

compost during the year was 89,018 tons. The achievement in production has exceeded the target fixed. This represents an acreage of 17,804 benefitted and an extra food production of 4,451 tons valued roughly at Rs. 8,90,200.

740. The production of urban compost in the integrated areas was 67,122 tons.

741. Apart from the production and distribution of compost, experiments were also conducted to test the relative efficacy of town waste compost as compared with farm waste compost and farm yard manure and found a superior effect on the yields due to the application of town compost as compared with that of farm yard manure and farm waste compost.

742. Planting of trees like Glyricidia round about the Compost Yards was advocated and this is becoming gradually popular. During the year, 75,000 trees were planted.

Sewage and Sullage Utilisation Scheme, Mysore City.

743. Under the Sewage and Sullage Utilisation Scheme, Mysore was the only city in the State where a Plant for the purification of sewage was constructed. The effluent from the septic tanks was used for irrigation purposes, the Municipality possessing 365 acres farm where vegetables, fruits, grass, coconuts, etc., were grown. The Plant was further extended to provide four million gallons of effluent per day. Considerable profit was earned by the Municipality under the Scheme.

744. Under the Rural Compost making, 5,163 new compost trenches were dug and 1,63,525 tons of cattle dung compost were prepared and used. Rural Compost was introduced in 8,522 villages during the year.

Tungabhadra Project.

745. Under Localisation, the total area for irrigation on the Mysore side in Hospet, Bellary and Siruguppa taluks was 92,339 acres serving 120 villages.

746. With a view to get the area cultivated and to help the ryots financially, a sum of Rs. 3,88,398 was distributed to the ryots through Co-operative Societies, Revenue Department as Land Improvement and Takavi loans. In addition to this, the N.E.S. of Bellary and Siruguppa Taluks also distributed a sum of Rs. 1,25,000 for the development of Ayacut.

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Plant Protection.

747. There was no serious and extensive outbreaks of pests or diseases during the year. It was gratifying to note that there was appreciable awakening on the part of cultivators to the necessity for plant protection measures and effective and quick measures were undertaken by the Department.

748. The highest incidence of pests and diseases was recorded on paddy. A total area of 18,920 acres of paddy were treated during the year. In addition, as a prophylactic measure, seed paddy to cover 1,385 acres was dressed with the fungicide. As usual, case-worm, stem borer and blast disease were responsible for more than 2/3 of the acreage.

749. The Pest Act was in force in the districts of Hassan and Chikmagalur. The Coffee Borer Fieldmen were continued during the year.

Agricultural Education.

750. The following Institutions were imparting Agricultural Education :—

Erstwhile Mysore State :—

1. Agricultural College at Hebbal.
2. Agricultural School at Hebbal.
3. Basic Agricultural School, R.K. Shala.
4. Basic Agricultural School, Somanahalli, Maddur.

Integrated Areas :—

1. Agricultural College, Dharwar.
2. Basic Agricultural School, Munirabad.
3. Agricultural School, Bagalkot.
4. Agricultural School, Devihosur.
5. Agricultural School, Arbhavi.
6. Agricultural School, Kumta.

751. *Agricultural College, Hebbal, Bangalore.*—The strength of the College during the year was 246. The strength of the School was 138. Three Merit Scholarships, 27 Backward Community Scholarships and 65 Free Studentships were awarded to the students of the College and for the students of the School, 3 Merit and 21 Backward Community Scholarships were awarded.

752. The annual Budget of the College was Rs. 2·08 lakhs.

753. *Agricultural College, Dharwar.*—The strength of the College was 251. Thirteen Merit Scholarships were awarded to the students of the various classes. The College

had undertaken Post-graduate instruction in ten sections, each being in-charge of a Professor. The College Estate comprises of 1,771 acres spread over several sections of the farm. The Veterinary Section of the College runs a hospital for the treatment of live-stock of the College as also of the public. The agronomy of the College consists of 800 acres.

754. The expenditure and receipts of the College Farm for the year was Rs. 83,146 and Rs. 1,03,700, respectively.

755. The financial statement of the College for the year was as follows :—

		Rs.
Establishment	...	2,31,451
Contingencies	...	1,70,873
Total	...	4,02,324
Receipts	...	1,64,726

Agricultural Research Stations.

756. There were 30 Agricultural Research Stations in the New Mysore State started in different periods with the object of conducting experiments on the cultivation of wet and dry crops and to demonstrate to the ryots of the surrounding areas, the improved methods of cultivation scientifically. The farms attached to these Stations were engaged in the activities of multiplication and distribution of improved varieties of high yielding, drought resistant selections of seed paddy, ragi, groundnut, cotton and green manure seeds, pulses and oil seeds, etc. In addition, the use of insecticides and adoption of crop rotations by the cultivators goes to the credit of the farms attached to these Research Stations. The compost making demonstrations with farm waste, rubbish, etc., on the farms proved popular among ryots. The farms attached to these Research Stations were the centres of visual education.

757. The results of the scientific experiments conducted on the Research Stations were brought home to the very doors of the ryots in supplying improved seeds and chemical manures by way of opening seed multiplication farms, subvention and demonstration farms in ryots fields.

758. In the Agricultural Research Station, Mandya, the preparation of clean jaggery by using activated carbon and improved furnace was an achievement. The improved furnace was very popular in that area.

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Cotton Development.

759. The total extension of acreage under the Cotton Extension Scheme during the year was 28,09,353 (4,09,929). The total quantity of improved cotton seeds distributed was 1,18,398 mds. The percentage of area under improved varieties to the total area under cotton was 68 (75) per cent. The total production of cotton during the year was 3,13,041 (1,03,929) bales of cotton.

760. Sufficient propaganda was conducted regarding the use of improved dibbling cotton seed instead of sowing wherever possible. In addition to these, cotton cultivators were educated regarding the treatment of cotton seeds for controlling pests and diseases. Treated seeds were sown over an area of 10,000 acres in Chitaldrug and Dharwar districts.

761. The object of the Cotton Development Scheme financed by the Indian Central Cotton Committee, Bombay, was to explore the possibilities of growing Sea Island Cotton as a rainfed crop in Kumari or dry lands of South Kanara District and to find out the optimum manurial and cultural requirements of the crop.

762. Six varieties of Sea Island were tried in a randomised replicated trial. The results show that variety Andrews with an acre yield of 929 lbs. is significantly higher yielding than other varieties. Bolls being 19 per plant as against 12 to 15 recorded by the other varieties. The treatment receiving 60 lbs. of nitrogen per acre in a randomised replicated trial recorded the highest yield.

Agricultural Colonies.

763. The four agricultural colonies three in the Visweswaraiah Canal area and one under the Marconahalli Reservoir ayacut area, continued to work during the year.

764. Orders were received to grant the proprietory rights to these colonists over the colony lands where they actually reside, under certain conditions.

765. An outstanding event of the year was the holding of the Agricultural Seminar in Hebbal during May 1956. More than 300 delegates from all over the State participated in the seminar. The First Young Farmers' Convention of the State was held at Shimoga during November 1956, in which the whole of the enlarged State of Mysore was represented.